american coalition for ethanol

Corn Ethanol is a Low Carbon Fuel. EPA needs to adopt the Energy Department GREET Model for GHG emissions.

Nearly three decades ago, scientists at the U.S. Department of Energy's Argonne National Lab developed the Greenhouse gas and Regulated Emissions and Energy use in Transportation (GREET) model. The GREET model is used to calculate energy use and GHGs emissions that occur during the full lifecycle production and combustion of all current and potential transportation fuels. The assumptions used by Argonne scientists in the GREET model are under constant review and updates to the model occur frequently.

As a requirement with enactment of the RFS, EPA had to conduct lifecycle GHG emissions modeling for renewable fuels. However, unlike the Argonne GREET model, EPA has not reviewed or updated their original (2010) corn ethanol GHG assessment. At that time, EPA estimated corn ethanol's carbon intensity was approximately equal to gasoline. In contrast, Argonne's scientists estimated that corn ethanol's carbon intensity was already 20 percent below gasoline in 2010.

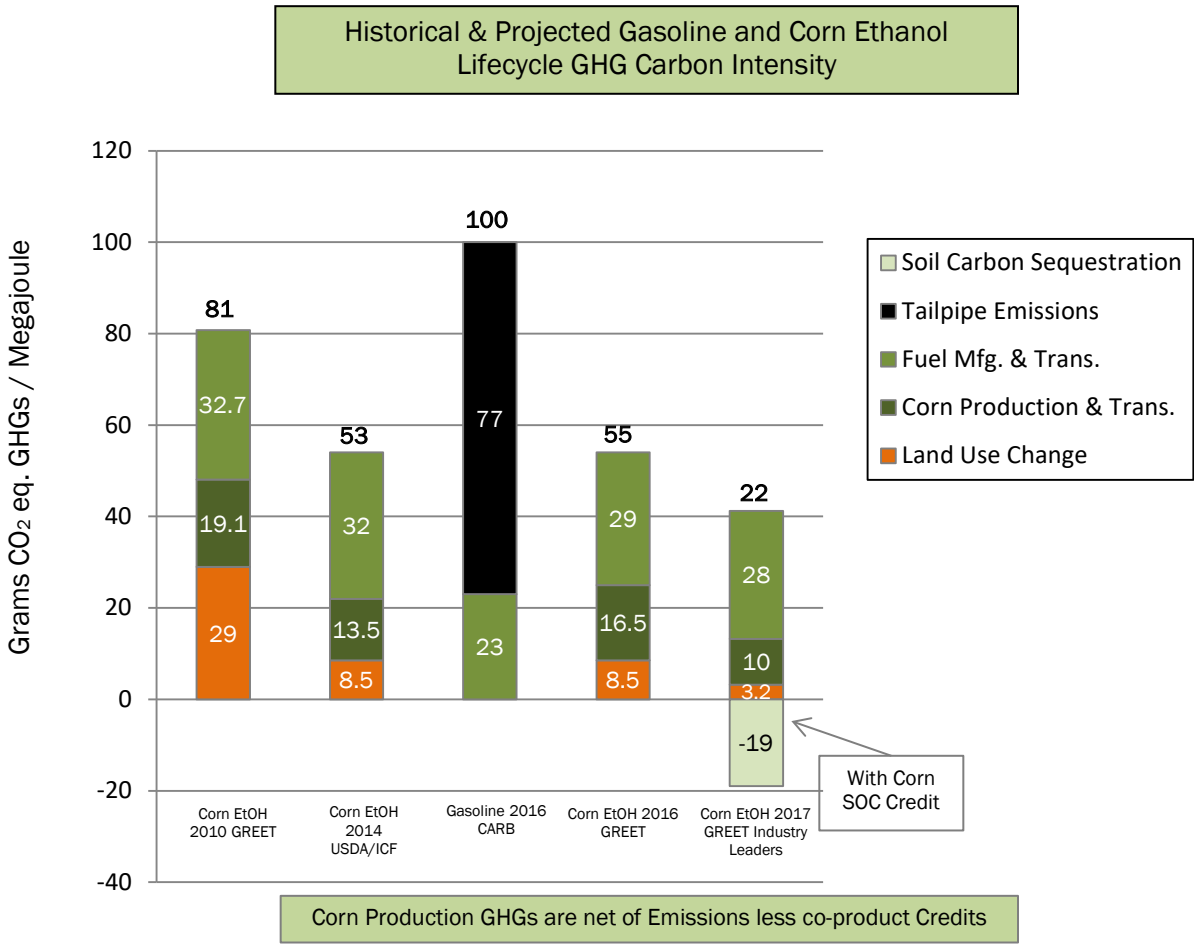
Current data from the GREET model indicate that corn ethanol's carbon intensity is almost 50 percent less than gasoline, providing significantly more GHG reduction benefits than when the RFS was enacted.

We urge EPA to adopt the latest analysis from the Department of Energy's GREET model to determine the lifecycle GHG emissions for corn ethanol.

EPA has resisted doing this because most corn ethanol is grandfathered under the RFS as being at least 20 percent cleaner than gasoline. What EPA fails to recognize is that state regulators and other countries working on low carbon fuel programs use EPA's outdated analysis as an excuse to limit the GHG reduction benefits allocated to corn ethanol. For example, Brazil is implementing a new program called RenovaBio modeled after California's Low Carbon Fuel Standard. If Brazil relies upon EPA's outdated analysis for U.S. corn ethanol to assign our exports with higher carbon intensity under RenovaBio, it could severely curtail the competitiveness of U.S. ethanol in one of the most important export destinations on the planet.

Until and unless EPA adopts the latest GREET modeling for corn ethanol, the Agency is penalizing American farmers who want to help meet the growing demand for low carbon fuels.

5000 S. Broadband Lane, Suite 224 Sioux Falls, SD 57108 605-334-3381 ethanol.org


Historical & Projected Gasoline and Corn Ethanol Lifecycle GHG Carbon Intensity
Grams CO_2 eq. GHGs / Megajoule
120
100
80
60
40
20
0
-20
-40
81
32.7
19.1
29
53
32
13.5
8.5
100
77
23
55
29
16.5
8.5
22
28
10
3.2
-19
With Corn SOC Credit
Soil Carbon Sequestration
Tailpipe Emissions
Fuel Mfg. & Trans.
Corn Production & Trans.
Land Use Change
Corn EtOH 2010 GREET
Corn EtOH 2014 USDA/ICF
Gasoline 2016 CARB
Corn EtOH 2016 GREET
Corn EtOH 2017 GREET Industry Leaders
Corn Production GHGs are net of Emissions less co-product Credits